

# DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## AIR QUALITY OPERATING PERMIT

Permit No. 164TVP01  
Application No. 164

Issue Date: August 29, 2002  
Expiration Date: September 28, 2007

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Chugach Electric Association, Inc.**, for the operation of the **International Station Power Plant**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As set out in AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

All facility-specific terms and conditions of Air Quality Control Permit-to-Operate 9421-AA011 have been incorporated into this Operating Permit.

This Operating Permit becomes effective September 29, 2002.

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John F. Kuterbach, Manager

Air Permits Program

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## List of Abbreviations Used in this Permit

AAC .....	Alaska Administrative Code
ADEC .....	Alaska Department of Environmental Conservation
AS.....	Alaska Statutes
ASTM.....	American Society for Testing and Materials
BACT .....	Best Available Control Technology
C.F.R. ....	Code of Federal Regulations
CO .....	Carbon Monoxide
dscf.....	Dry standard cubic foot
EPA .....	US Environmental Protection Agency
gr./dscf.....	grain per dry standard cubic foot (1 pound = 7000 grains)
GPH.....	gallons per hour
HAPs or HACs....	Hazardous Air Pollutants or Hazardous Air Contaminants [ <i>HAPs</i> or <i>HACs</i> as defined in AS 46.14.990(14)]
ID .....	Source Identification Number
kPa.....	kiloPascals
MACT .....	Maximum Achievable Control Technology
MR&R.....	Monitoring, Recordkeeping, and Reporting
NESHAPs .....	Federal National Emission Standards for Hazardous Air Pollutants [ <i>NESHAPS</i> as defined in 40 C.F.R. 61]
NO <sub>x</sub> .....	Nitrogen Oxides
NSPS .....	Federal New Source Performance Standards [ <i>NSPS</i> as defined in 40 C.F.R. 60]
ppm.....	Parts per million
PS .....	Performance specification
PSD .....	Prevention of Significant Deterioration
RM.....	Reference Method
SIC. ....	Standard Industrial Classification
SO <sub>2</sub> .....	Sulfur dioxide
TPH .....	Tons per hour
tpy.....	Tons per year
VOC .....	volatile organic compound [ <i>VOC</i> as defined in 18 AAC 50.990(103)]
wt% .....	weight percent

## **Section 1. Identification**

### **Names and Addresses**

Permittee:	<b>Chugach Electric Association, Inc.</b> P.O. Box 196300 Anchorage, Alaska 99519-6300
Facility Name:	<b>International Station Power Plant</b>
Location:	Township 13N, Range 4 W, the Southeast ¼ of Section 36
Physical Address:	5601 Minnesota Drive Anchorage, Alaska 99519
Owner:	Chugach Electric Association, Inc. P.O. Box 196300 Anchorage, Alaska 99519-6300
Operator:	Same as Owner
Permittee's Responsible Official	Carl H. Harmon, Environmental Engineering Manager
Designated Agent:	Evan J. Griffith Chugach Electric Association, Inc.
Facility and Building Contact:	Carl H. Harmon Chugach Electric Association, Inc. (907) 762-4739
Fee Contact:	Carl H. Harmon Carl_Harmon@chugachelectric.com

### **Facility Process Description**

SIC Code of the Facility: 4911 - Electric Services

[18 AAC 50.350(b)(1), 1/18/97]

## **Section 2. General Emission Information**

[18 AAC 50.350(b)(1), 1/18/97]

Emissions of Regulated Air Contaminants, as provided in the Permittee's application:

Nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), sulfur oxides (SO<sub>x</sub>), particulate matter (PM-10), volatile organic compounds (VOCs), and hazardous air pollutants (HAPs).

Facility Classifications:

- (1) 18 AAC 50.300(b)(2)
- (2) 18 AAC 50.300(c)(1)

Operating Permit Classifications:

- (1) 18 AAC 50.325(b)(1)
- (2) 18 AAC 50.325(c)

### **Section 3. Source Inventory and Description**

Sources listed in Table 1 have specific monitoring, record keeping, or reporting conditions in this permit. Source descriptions and ratings are given for identification purposes only.

**Table 1 - Source Inventory**

<b>ID</b>	<b>Source Name</b>	<b>Source Description</b>	<b>Rating/size</b>	<b>Installation Date</b>
<i>Gas Fuel Burning Equipment</i>				
1	GE Frame 5 Turbine	Power Unit No. 1	230 MMBtu/hr	1965
2	GE Frame 5 Turbine	Power Unit No. 2	230 MMBtu/hr	1965
3	Westinghouse Turbine	Power Unit No. 3	276 MMBtu/hr	1969
<i>Diesel Fuel Burning Equipment</i>				
4	Detroit Diesel IC Engine	Building A Standby Generator	175 kW	1984

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## **Section 4. Fee Requirements**

- 1. Assessable Emissions.** The Permittee shall pay to the department an annual emission fee based on the facility's assessable emissions as determined by the department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410(b). The department will assess fees per ton of each air contaminants that the facility emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of

- 1.1 the facility's assessable potential to emit of 1,634 tpy; or
- 1.2 the facility's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year, when demonstrated by
  - a. an enforceable test method described in 18 AAC 50.220;
  - b. material balance calculations;
  - c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
  - d. other methods and calculations approved by the department.

[18 AAC 50.346(a)(1), 5/3/02]

- 2. Assessable Emission Estimates.** The Permittee shall submit assessable emissions estimates as follows:

- 2.1 No later than March 31 of each year, submit an estimate of the facility's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emission Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795, including all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates, or
- 2.2 If no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit listed in condition 1.1.

[18 AAC 50.346(a)(1), 5/3/02 & 18 AAC 50.410, 1/18/97]

## **Section 5. Source-Specific Requirements**

### **Fuel-Burning Equipment**

- 3. Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source ID(s) 1 – 4 to reduce visibility through the exhaust effluent by either:

- a. more than 20 percent for more than three minutes in any one hour<sup>1</sup>, or  
[18 AAC 50.055(a)(1), 1/18/97 & 40 CFR 52.70, 11/18/98 & 18 AAC 50.350(d)(1)(C), 6/21/98]
- b. more than 20 percent averaged over any six consecutive minutes<sup>2</sup>.  
[18 AAC 50.055(a)(1), 5/3/02 & 18 AAC 50.350(d)(1)(C), 6/21/98]

- 3.1 For Source ID(s) 1 – 3 monitor, record, and report as follows:

- a. The Permittee shall use only gas as fuel in Source ID(s) 1 – 3. The Permittee shall certify in each operating report required under condition 36 that the sources burned only gas.
- b. The Permittee shall report under condition 35 if any fuel is burned other than gas.

[18 AAC 50.346(c) & 50.350(g) – (i), 5/3/02]

- 3.2 For Source ID 4, monitoring shall consist of an annual compliance certification under condition 37 with the opacity standard.

[18 AAC 50.346(c) & 50.350(g) – (i), 5/3/02]

- 4. Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from Source ID(s) 1 – 4 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1) 1/18/97, 18 AAC 50.346(c), 5/3/02; 18 AAC 50.350(d)(1)(D), 6/21/98]

- 4.1 For Source ID(s) 1 – 3 monitor, record, and report as follows:

- a. The Permittee shall comply with conditions 3.1a and 3.1b.

[18 AAC 50.346(c) & 50.350(g) – (i), 5/3/02]

- 4.2 For Source ID 4, monitoring shall consist of an annual compliance certification under condition 37 with the particulate matter standard.

[18 AAC 50.346(c) & 350(g) – (i), 5/3/02]

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<sup>1</sup> For purposes of this permit, the “more than three minutes in any one hour” criterion in this condition and condition 10.a will no longer be effective when the Air Quality Control (18 AAC 50) regulation package effective 5/3/02 is adopted by the U.S. EPA.

<sup>2</sup> The six-minute average standard is enforceable only by the state until 18 AAC 50.055(a)(1), dated May 3, 2002, is approved by EPA into the SIP at which time this standard becomes federally enforceable.



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- 5. Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO<sub>2</sub>, from Source ID(s) 1 – 4 to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97 & 18 AAC 50.350(d)(1)(C), 6/21/98]

5.1 Diesel Fuel (Source ID 4):

- a. The Permittee shall do one of the following for each shipment of fuel:
  - (i) if the fuel grade requires a sulfur content less than 0.5% by weight, keep receipts that specify fuel grade and amount; or
  - (ii) if the fuel grade does not require a sulfur content less than 0.5% by weight, keep receipts that specify fuel grade and amount and
    - (A) test the fuel for sulfur content; or
    - (B) obtain test results showing the sulfur content of the fuel from the supplier or refinery; the test results must include a statement signed by the supplier or refinery of what fuel they represent.
- b. Fuel testing under condition 5.1a must follow an appropriate method listed in 18 AAC 50.035 or another method approved in writing by the department.
- c. If a load of fuel contains greater than 0.75% sulfur by weight, the Permittee shall calculate SO<sub>2</sub> emissions in PPM using either Section 12 or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).
- d. The Permittee shall report in accordance with this condition 5.1d.
  - (i) If SO<sub>2</sub> emissions are calculated under condition 5.1c to exceed 500 ppm, the Permittee shall report under condition 35. When reporting under this condition 5.1d(i), include the calculation under Section 12.
  - (ii) The Permittee shall include in the report required by condition 36.
    - (A) a list of the fuel grades received at the facility during the reporting period;
    - (B) for any grade with a maximum fuel sulfur greater than 0.5% sulfur, the fuel sulfur of each shipment; and
    - (C) for fuel with a sulfur content greater than 0.75%, the calculated SO<sub>2</sub> emissions in PPM.

[18 AAC 50.346(c) & 50.350(g) - (i), 5/3/02]

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- 5.2 Fuel Gas: The Permittee shall burn only pipeline natural gas in Source ID(s) 1 – 3.
- a. Monitoring and Recordkeeping – The Permittee shall keep readily accessible records for the life of this permit showing that all supply contracts for natural gas used at the facility include a maximum hydrogen sulfide specification of 1.0 grain per 100 standard cubic feet of gas and 20 grains of sulfur per 100 standard cubic feet of gas.
- [18 AAC 50.335(g), 1/18/97]  
[18 AAC 50.350(g) – (h), 5/3/02]
6. The Permittee shall install, operate, and maintain in good working order gas meters on each Source ID(s) 1 – 3. The meters shall have an accuracy of  $\pm 5\%$ .
- [Operating Permit No. 9421-AA011, 4/13/95]
- 6.1 Monitoring and Recordkeeping – Monitor and record quantity of pipeline natural gas consumed in each Source ID(s) 1 – 3, in million cubic feet per month.
- [18 AAC 50.350(g) – (h), 5/3/02]
- 6.2 Reporting – Include copies of the records required by condition 6.1 with the facility operating report required by condition 36.
- [18 AAC 50.350(i), 1/18/97]
7. The Permittee shall install, operate, and maintain in good working order a continuous monitoring system for measuring kilowatt-hours and hours of operation on each Source ID(s) 1 – 3.
- [Operating Permit No. 9421-AA011, 4/13/95]
- 7.1 Monitoring and Recordkeeping – Monitor and record for each Source ID(s) 1 – 3, the following:
- a. the number of hours operated per month
- b. maximum one hour kilowatt/hour production per month;
- c. total power generated (kilowatt/hour) per month; and
- d. year-to-date total for each turbine.
- [18 AAC 50.350(g) – (h), 5/3/02]
- 7.2 Reporting – Include copies of the records required by condition 7.1 with the facility operating report required by condition 36.
- [18 AAC 50.350(i), 1/18/97]
8. The Permittee shall operate Source ID 4 for no more than 250 hours per consecutive twelve-month period.
- [18 AAC 50.335(g), 1/18/97]
- 8.1 Monitoring and Recordkeeping – Monitor and record the number of hours operated per month in Source ID 4.
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- 8.2 Calculate each month the rolling 12-month total of hours operated in the previous consecutive twelve-month period.

[18 AAC 50.350(g) – (h), 5/3/02]

- 8.3 Reporting – Report the rolling 12-month total of hours operated for each month of the reporting period with the facility operating report required by condition 36.

- 8.4 Report under condition 35 if the rolling 12-month total for any given month exceeds the limit in condition 8.

[18 AAC 50.350(i), 1/18/97]

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## **Section 6. Insignificant Sources**

This section contains the requirements that the Permittee identified under 18 AAC 50.335(q)(2) as applicable to insignificant sources at the facility. This section also specifies the testing, monitoring, recordkeeping, and reporting for insignificant sources that the Department finds necessary to ensure compliance with the applicable requirements. Insignificant sources are not exempted from any air quality control requirement or federally enforceable requirement.

As set out in 18 AAC 50.350(m), the shield of AS 46.14.290 does not apply to insignificant sources.

- 9.** For sources at the facility that are insignificant as defined in 18 AAC 50.335(q)-(v) that are not listed in this permit, the following apply:

- 9.1 the Permittee shall submit the compliance certifications of condition 37 based on reasonable inquiry;
- 9.2 the Permittee shall comply with the requirements of condition 19;
- 9.3 no other monitoring, record keeping, or reporting is required.

[18 AAC 50.346(b)(1), 5/3/02]

- 10.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process or fuel-burning equipment to reduce visibility through the exhaust effluent by either:

- a. more than 20 percent for more than three minutes in any one hour<sup>3</sup>, or

[18 AAC 50.055(a)(1), 1/18/97 & 40 CFR 52.70, 11/18/98]

- b. more than 20 percent averaged over any six consecutive minutes<sup>4</sup>.

[18 AAC 50.055(a)(1), 5/3/02]

- 11.** The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

- 12.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO<sub>2</sub>, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97]

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<sup>3</sup> See Footnote 1.

<sup>4</sup> See Footnote 2.

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## **Section 7. Generally Applicable Requirements**

- 13. Asbestos NESHAP.** The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(3), 1/18/97]  
[40 C.F.R. 61, Subparts A & M, 12/19/96]

- 14. Good Air Pollution Control Practice<sup>5</sup>.** The permittee shall do the following for Source IDs 1 - 4:

- 14.1 perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;
- 14.2 keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format;
- 14.3 keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.346(b)(2), 5/3/02]

- 15. Dilution.** The Permittee shall not dilute emissions with air to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

- 16. Reasonable Precautions to Prevent Fugitive Dust.** A person who causes or permits bulk material to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.

[18 AAC 50.045(d), 1/18/97]

- 17. Stack Injection.** The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, unless approved in writing by the Department.

[18 AAC 50.055(g), 1/18/97]

- 18. Open Burning.** The Permittee shall comply with the following requirements when conducting open burning at the facility.

- 18.1 Open burning outside the lined training pits requires prior verbal approval from the DEC Air Quality office, telephone 1-907-269-3066.
- 18.2 Any excess wastewater, which will not be contained within the liner, shall be disposed of in accordance with 18 AAC 72.

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<sup>5</sup>Condition 14 is enforceable only by the state until 18 AAC 50.346(b)(2), dated May 3, 2002, is approved by EPA into the SIP at which time this standard becomes federally enforceable.

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- 18.3 Hazardous material and waste oil other than the hydrocarbons approved shall not be allowed in the burn. Spill cleanup equipment shall be on-site and any spill shall be cleaned up and reported to the DEC (18 AAC 75.300-307).
- 18.4 **Notification** (more than 20 gallons per session): The DEC shall be notified at least one day in advance of any planned burn of more than 20 gallons, telephone 1-907-269-3066. Your local FAA office and/or the Control Tower should be notified (if necessary), as well as local fire department(s). Public notification shall occur through the local news media (if present) at least three days prior to the burn (18 AAC 50.065 (j)), so that each advertisement shall have:
- a. Permittee or other contact name
  - b. contact's telephone number
  - c. location of the burn
  - d. type and approximate amount of fuel being burned
- 18.5 Each series of burning occurrences must not exceed two hours of total burn time and must be separated by one hour, otherwise a burn schedule must be submitted.
- 18.6 Burning shall not be done during stagnant air conditions (fogs or inversions).
- 18.7 The burning shall comply with all local ordinances. This open burn approval does not exempt the activity from any other permit requirements. Please contact local authorities for more information.
- 18.8 Permittee shall submit an annual report to DEC due one month after the end of the calendar year. The report shall include the following information about each training session:
- a. date of the training session
  - b. number of trainees
  - c. total burn time (for each session)
  - d. type of fuel used
  - e. the gallons of fuel used
  - f. visual description of smoke transport and dispersal conditions, with approximate wind speed and direction.
  - g. list of complaints received concerning excess odors or smoke (if any), including name, phone number of complainant and any corrective action taken by the training facility [18 AAC 50.065(k)].

[Approval Number: Y012-SC045]  
[18 AAC 50.335(g) – (h), 1/18/97]

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**19. Air Pollution Prohibited.** No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 5/26/72]

- 19.1 If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to condition 35.
- 19.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of condition 19.
- 19.3 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if
- a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the facility have caused or are causing a violation of condition 19; or
  - b. the department notifies the Permittee that it has found a violation of condition 19.
- 19.4 The Permittee shall keep records of
- a. the date, time, and nature of all emissions complaints received;
  - b. the name of the person or persons that complained, if known;
  - c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of condition 19; and
  - d. any corrective actions taken or planned for complaints attributable to emissions from the facility.
- 19.5 With each facility operating report under condition 36, the Permittee shall include a brief summary report which must include
- a. the number of complaints received;
  - b. the number of times the Permittee or the department found corrective action necessary;
  - c. the number of times action was taken on a complaint within 24 hours; and
  - d. the status of corrective actions the Permittee or department found necessary that were not taken within 24 hours.

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19.6 The Permittee shall notify the department of a complaint that is attributable to emissions from the facility within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

[18 AAC 50.346(a)(2) & 50.350(h) – (i), 5/3/02]

**20. Permit Renewal.** To renew this permit, the Permittee shall submit a complete application under 18 AAC 50.335 no sooner than **March 28, 2006** and no later than **March 28, 2007** to renew this permit.

[18 AAC 50.335(a), 1/18/97]



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## **Section 8. General Source Testing and Monitoring Requirements**

- 21. Requested Source Tests.** In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

[18 AAC 50.345(a) & (k), 5/3/02]

- 22. Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

22.1 at a point or points that characterize the actual discharge into the ambient air; and

22.2 at the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air.

[18 AAC 50.220(b) & 50.350(g), 1/18/97]

- 23. Reference Test Methods.** The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

23.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.040(a), 7/2/00]

[18 AAC 50.220(c)(1)(A) & 50.350(g), 1/18/97]

[40 C.F.R. 60, 7/1/99]

23.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b), 50.220(c)(1)(B) & 50.350(g), 1/18/97]

[40 C.F.R. 61, 12/19/96]

23.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c), 7/2/00]

[18 AAC 50.220(c)(1)(C) & 50.350(g), 1/18/97]

[40 C.F.R. 63, 7/1/99]

23.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9.

[18 AAC 50.030, 12/30/00]

[18 AAC 50.220(c)(1)(D) & 50.350(g), 1/18/97]

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- 23.5 Source testing for emissions of particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.
- [18 AAC 50.040(a)(4), 7/2/00]  
[18 AAC 50.220(c)(1)(E) & 50.350(g), 1/18/97]  
[40 C.F.R. 60, Appendix A, 7/1/99]
- 23.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M.
- [18 AAC 50.035(b)(2), 7/2/00]  
[18 AAC 50.220(c)(1)(F) & 18 AAC 50.350(g), 1/18/97]  
[40 C.F.R. 51, Appendix M, 7/1/99]
- 23.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.
- [18 AAC 50.040(c), 7/2/00]  
[18 AAC 50.220(c)(2) & 50.350(g), 1/18/97]  
[40 C.F.R. 63, Appendix A, Method 301, 7/1/99]
- 24. Excess Air Requirements.** To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).
- [18 AAC 50.220(c)(3), 18 AAC 50.350(g), 1/18/97 & 18 AAC 50.990(88), 5/3/02]
- 25. Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the department. The Permittee may delay a source test beyond the original deadline only if extension is approved in writing by the department's appropriate division director or designee.
- [18 AAC 50.345(a) & (l), 5/3/02]
- 26. Test Plans.** Except as provided in condition 29, before conducting any source tests, the Permittee shall submit a plan to the department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the source will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under condition 21 and at least 30 days before the scheduled date of any test unless the department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.
- [18 AAC 50.345(a) & (m), 5/3/02]
- 27. Test Notification.** Except as provided in condition 29, at least 10 days before conducting a source test, the Permittee shall give the department written notice of the date and the time the source test will begin.
- [18 AAC 50.345(a) & (n), 5/3/02]
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- 28. Test Reports.** Except as provided in condition 29, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in condition 31. If requested in writing by the department, the Permittee must provide preliminary results in a shorter period of time specified by the department.

[18 AAC 50.345(a) & (o), 5/3/02]

- 29. Test Exemption.** The Permittee is not required to comply with condition 22.2, 26, 27 and 28 when the exhaust is observed for visible emissions.

[18 AAC 50.345(a), 5/3/02]

- 30. Particulate Matter Calculations.** In source testing for compliance with the particulate matter standards in conditions 4 and 11, the three-hour average is determined using the average of three one-hour test runs.

[18 AAC 50.220(f) & 50.350(g), 1/18/97]

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## **Section 9. General Recordkeeping, Reporting, and Compliance Certification Requirements**

- 31. Certification.** The Permittee shall certify all reports, compliance certifications, or other documents submitted to the department and required under the permit by including the signature of a responsible official for the permitted facility following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal. When certifying a compliance certification, the official's signature must be notarized.

[18 AAC 50.345(a) & (j), 5/3/02]

- 32. Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.

[18 AAC 50.350(i), 1/18/97]

- 33. Information Requests.** The Permittee shall furnish to the department, within a reasonable time, any information the department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the department copies of records required to be kept by the permit. The department may require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.345(a) & (i), 5/3/02]

- 34. Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

- 34.1 copies of all reports and certifications submitted pursuant to this section of the permit; and
- 34.2 records of all monitoring required by this permit, and information about the monitoring including:
  - a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;
  - b. sampling dates and times of sampling or measurements;
  - c. the operating conditions that existed at the time of sampling or measurement;
  - d. the date analyses were performed;
  - e. the location where samples were taken;

- 
- f. the company or entity that performed the sampling and analyses;
  - g. the analytical techniques or methods used in the analyses; and
  - h. the results of the analyses.

[18 AAC 50.350(h), 5/3/02]

### **35. Excess Emission and Permit Deviation Reports.**

35.1 Except as provided in condition 19, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

- a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commences or is discovered, report
  - (i) emissions that present a potential threat to human health or safety; and
  - (ii) excess emissions that the Permittee believes to be unavoidable;
- b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;
- c. report all other excess emissions and permit deviations
  - (i) within 30 days of the end of the month in which the emissions or deviation occurs, except as provided in conditions 35.1c(ii);
  - (ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the department provides written permission to report under condition 35.1c(i); and

35.2 When reporting excess emissions, the Permittee must report using either the department's on-line form, which can be found at [www.dec.state.ak.us/awq/excess/report.asp](http://www.dec.state.ak.us/awq/excess/report.asp), or, if the Permittee prefers, the form contained in Section 13 of this permit. The Permittee must provide all information called for by the form that is used.

35.3 When reporting a permit deviation, the Permittee must report using the form contained in Section 13 of this permit. The Permittee must provide all information called for by the form.

35.4 If requested by the department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.346(a)(3), 5/3/02]

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**36. Operating Reports.** During the life of this permit, the Permittee shall submit an original and two copies of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

36.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

36.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 36.1, either

a. The Permittee shall identify

- (i) the date of the deviation;
- (ii) the equipment involved;
- (iii) the permit condition affected;
- (iv) a description of the excess emissions or permit deviation; and
- (v) any corrective action or preventive measures taken and the date of such actions.

b. when excess emissions or permit deviations have already been reported under condition 35 the Permittee may cite the date or dates of those reports.

[18 AAC 50.346(b)(3), 5/3/02]

**37. Annual Compliance Certification.** Each year by March 31, beginning with the year following issuance of this permit, the Permittee shall compile and submit to the Department an original and two copies of an annual compliance certification report as follows:

[18 AAC 50.350(j), 1/18/97]

37.1 For each permit term and condition set forth in Section 4 through Section 9, including terms and conditions for monitoring, reporting, and recordkeeping:

[18 AAC 50.350(d)(4), 1/18/97]

- a. certify the compliance status over the preceding calendar year consistent with the monitoring required by this permit;
- b. state whether compliance is intermittent or continuous; and
- c. briefly describe each method used to determine the compliance status.
- d. notarize the responsible official's signature.

[18 AAC 50.345(a) & (j), 5/3/02]

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37.2 In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.350(j), 1/18/97]

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**Section 10. Standard Conditions Not Otherwise Included in the Permit**

- 38.** The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

38.1 an enforcement action,

38.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280, or

38.3 denial of an operating-permit renewal application.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (c), 5/3/02]

- 39.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (d), 5/3/02]

- 40.** Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of this permit.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (e), 5/3/02]

- 41.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are:

41.1 included and specifically identified in the permit, or

41.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (b), 5/3/02]

- 42.** The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (f), 5/3/02]

- 43.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (g), 5/3/02]

- 44.** The Permittee shall allow the department or an inspector authorized by the department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

44.1 enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;



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- 44.2 have access to and copy any records required by the permit,
  - 44.3 inspect any facilities, equipment, practices, or operations regulated by or referenced in the permit, and
  - 44.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (h), 5/3/02]

### **Section 11. Permit As Shield from Inapplicable Requirements**

In accordance with AS 46.14.290, and based on information supplied in the facility application, this section of the permit contains the requirements determined by the Department not to be applicable to the International Station Power Plant.

Table 2 identifies the sources that are not subject to the specified requirements at the time of permit issuance. Some of the requirements listed below may become applicable during the permit term due to an invoking event, even though the requirement is deemed inapplicable at the time of permit issuance.

**Table 2 - Permit Shields Granted.**

<b>Non Applicable Requirements</b>	<b>Reason for non-applicability</b>
Facility Wide	
40 CFR 60 Subpart GG	The turbines at this facility were installed before the October 3, 1977, Subpart GG applicability date, and have not been modified or reconstructed since installation.
40 CFR 82 Subpart B	Facility and its employees do not perform service on motor vehicle air conditioners, for consideration or otherwise.
40 CFR 82 Subpart F	Facility does not contain commercial, industrial, or comfort air conditioning appliances containing ozone-depleting substances used as refrigerant.
18 AAC 50.050(a)(2) & 18 AAC 50.055(a)(2)-(a)(9)	The facility does not contain any sources subject to these opacity standards.
18 AAC 50.055(b)(2)-(b)(6)	The facility does not contain any sources subject to these particulate standards.
18 AAC 50.055(d)-(f)	The facility does not contain any sources subject to these sulfur standards.
18 AAC 50.070	Facility contains no marine vessels.
18 AAC 50.075	The facility sources do not contain any wood-fired heating devices.

[18 AAC 50.350(l), 1/18/97]

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### Section 12. SO<sub>2</sub> Material Balance Calculation

If a fuel shipment contains more than 0.75 percent sulfur by weight, calculate the three-hour exhaust concentration of SO<sub>2</sub> using the following equations:

$$A = 31,200 \times [\text{wt}\%S_{\text{fuel}}] = 31,200 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$B = 0.148 \times [\text{wt}\%S_{\text{fuel}}] = 0.148 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$C = 0.396 \times [\text{wt}\%C_{\text{fuel}}] = 0.396 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$D = 0.933 \times [\text{wt}\%H_{\text{fuel}}] = 0.933 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$E = B + C + D = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$F = 20.9 - [\text{vol}\%_{\text{dry}}O_{2, \text{exhaust}}] = 20.9 - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$G = [\text{vol}\%_{\text{dry}}O_{2, \text{exhaust}}] \text{ ? } F = \underline{\hspace{2cm}} \text{ ? } \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$H = 1 + G = 1 + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$I = E \times H = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$\text{SO}_2 \text{ concentration} = A \text{ ? } I = \underline{\hspace{2cm}} \text{ ? } \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ PPM}$$

The **wt%S<sub>fuel</sub>**, **wt%C<sub>fuel</sub>**, and **wt%H<sub>fuel</sub>** are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to condition 5.1. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (**vol%<sub>dry</sub>O<sub>2, exhaust</sub>**) is obtained from oxygen meters, manufacturer's data, or from the most recent analysis under 40 C.F.R. 60, Appendix A-2, Method 3, adopted by reference in 18 AAC 50.040(a), at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if **wt%S<sub>fuel</sub>** = 1.0%, then enter 1.0 into the equations not 0.01 and if **vol%<sub>dry</sub>O<sub>2, exhaust</sub>** = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.350(g), 1/18/97 & 18 AAC 50.346(c), 5/3/02]

### Section 13. ADEC Notification Form

Fax this form to: (907) 269-7508 Telephone: (907) 269-8888

**Chugach Electric Association, Inc.**

Company Name

**International Station Power Plant**

Facility Name

#### Reason for notification:

☒ **Excess Emissions**

*If you checked this box*

*Fill out section 1*

☐ **Other Deviation from Permit Condition**

*If you checked this box*

*fill out section 2*

When did you discover the Excess Emissions or Other Deviation:

Date: \_\_/\_\_/\_\_ Time:\_\_:\_\_

### Section 1. Excess Emissions

#### (a) Event Information (Use 24-hour clock):

	START Time: (hr:min):	END Time:	Duration
Date: _____	_____:	_____:	_____:
Date: _____	_____:	_____:	_____:
		<b>Total:</b>	_____:

#### (b) Cause of Event (Check all that apply):

<input checked="" type="checkbox"/> START UP	<input type="checkbox"/> UPSET CONDITION	<input type="checkbox"/> CONTROL EQUIPMENT
<input type="checkbox"/> SHUT DOWN	<input type="checkbox"/> SCHEDULED MAINTENANCE	<input type="checkbox"/> OTHER _____

*Attach a detailed description of what happened, including the parameters or operating conditions exceeded.*

#### (c) Sources Involved:

*Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.*

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____

#### (d) Emission Limit Potentially Exceeded

*Identify each emission standard potentially exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Identify what observation or data prompted this report. Attach additional sheets as necessary.*

Permit Condition	Limit	Emissions Observed
_____	_____	_____
_____	_____	_____

#### (e) Excess Emission Reduction:

*Attach a description of the measures taken to minimize and/or control emissions during the event.*

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**(f) Corrective Actions:**

*Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence.*

**(g) Unavoidable Emissions:**

*Do you intend to assert that these excess emissions were unavoidable?*

† YES                      † NO

*Do you intend to assert the affirmative defense of 18 AAC 50.235?*

† YES                      † NO

**Section 2. Other Permit Deviations**

**(a) Sources Involved:**

*Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.*

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**(b) Permit Condition Deviation:**

*Identify each permit condition deviation or potential deviation. Attach additional sheets as necessary.*

Permit Condition	Potential Deviation
_____	_____
_____	_____
_____	_____

**(c) Corrective Actions:**

*Attach a description of actions taken to correct the deviation or potential deviation and to prevent recurrence.*

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

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Printed Name:

Signature:

Date:

**Alaska Department of Environmental Conservation**  
**Air Permits Program**

**August 29, 2002**

**Chugach Electric Association, Inc.**  
**International Station Power Plant**

**STATEMENT OF BASIS**  
**of the terms and conditions for**  
**Permit No. 164TVP01**

**Prepared by Cynthia Espinoza**

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## INTRODUCTION

This document sets forth the legal and factual basis for the terms and conditions of Operating Permit No. 164TVP01.

### FACILITY IDENTIFICATION

Section 1 contains information on the facility as provided in the title V permit application. This facility is a power generation plant with three natural gas-fired turbine generator sets. The facility also utilizes small gas-fired heaters for comfort heating, and two diesel-fired engines serve as the facility's backup AC generators. This facility is classified under SIC code No. 4911, electric, gas and sanitary services.

Pipeline natural gas is supplied to the facility via pipeline from ENSTAR Natural Gas Company. The gas is then distributed directly to the facility's gas-fired combustion equipment.

The facility is owned and operated by Chugach Electric Association, Inc., and Chugach Electric Association, Inc. is the Permittee for the facility's operating permit.

### SOURCE INVENTORY AND DESCRIPTION

Table 1 contains information on the sources at the facility as provided in the application. The source inventory was revised to remove two significant sources. One source is a Cummins standby (blackstart) diesel generator, which is an insignificant source, based on emission rate under 18 AAC 50.335(r). The other source is an oil storage tank that has been decommissioned, and is no longer located at the facility.

Additionally, a Detroit diesel IC engine was added to the inventory. This source was installed in 1984, and Chugach Electric Association, Inc. requested an operational limit so the facility modification does not increase emission of any regulated air contaminant beyond the PSD applicability thresholds set out in 18 AAC 50.300(h)(3)(A) & (B).

The major sources at this facility are three turbines that burn pipeline natural gas fuel only, two of the turbines were installed in 1965 (230 MMBtu/hr) and the third one was installed in 1969 (276 MMBtu/hr). These three turbines were installed before the 40 C.F.R. 60, Subpart GG applicability date (October 3, 1977).

Table 1 describes the sources regulated by the permit. The table is provided for information and identification purposes only. Specifically, the source rating/size provided in the table is not intended to create an enforceable limit.

## EMISSIONS

Table A contains emission information as provided in the application. A summary of the potential to emit (PTE)<sup>6</sup> from the International Station Power Plant is shown in the table below.

**Table A - Emissions Summary, in Tons Per Year (tpy)**

Pollutant	NO <sub>x</sub>	CO	PM-10	SO <sub>2</sub>	VOC	HAPs	Total
PTE	1238.7	312.1	36	23.9	23.2	23.8	1657.7
Assessable PTE	1238.7	312.1	36	23.9	23.2	0	1633.9

The assessable PTE listed under condition 1.1 is the sum of the emissions of each individual regulated air contaminant for which the facility has the potential to emit quantities greater than 10 tpy.

The PTE for the five criteria pollutants were calculated using AP-42 emission factors. The PTE for HAPs were calculated using the GRI-HAPCalc® 3.01 software. The amount of HAPs shown in Table A is the aggregate of all contaminants with no single contaminant equal to or greater than 10 tpy.

## BASIS FOR REQUIRING AN OPERATING PERMIT

Section 2 includes a description of the regulatory classifications of the International Station Power Plant. This facility is classified under 18 AAC 50.300(b)(2) as having the potential to violate one or more of the ambient air quality standards because it contains fuel-burning equipment with a rated capacity of 100MMBtu/hour or more. It is also classified as a Prevention of Significant Deterioration (PSD) Major Facility as defined in 18 AAC 50.300(c)(1), because it has a potential to emit 250 tons per year (tpy) or more of a regulated air contaminant. However this facility has not gone through a PSD review.

This facility requires an operating permit under 18 AAC 50.325(b)(1) and 18 AAC 50.325(c) because it has the potential to emit more than 100 tpy of a regulated air contaminant and is within the category of facilities subject to AS 46.14.130(b)(4).

Alaska regulations require operating permit applications to include identification of “regulated sources.” As applied to International Station Power Plant, the state regulations require a description of:

- ? Each source regulated by a standard in 18 AAC 50.055, Industrial Processes and Fuel Burning Equipment, under 18 AAC 50.335(e)(4)(C);

<sup>6</sup> *Potential to Emit* or *PTE* means the maximum quantity of a release of an air contaminant, considering a facility's physical or operational design, based on continual operation of all sources with the facility for 24 hours a day, 365 days a year, reduced by the effect of pollution control equipment and approved state or federal limitations on the capacity of the facility's sources or the facility to emit an air contaminant, including the limitations such as restrictions on hours of rate of operation and type or amount of material combusted, stored, or processed as defined in AS 46.14.990(21), effective 1/18/97.



- 
- ? Each source subject to a standard adopted by reference in 18 AAC 50.040 under 18 AAC 50.335(e)(2); and
  - ? Sources subject to requirements in an existing Department permit 18 AAC 50.335(e)(5).

The emission sources at International Station Power Plant classified as “regulated sources” according to the above Department regulations are listed in Table 1 of Operating Permit No. 164TVP01.

## **CURRENT AIR QUALITY PERMITS**

### **Previous Air Quality Permit to Operate**

The most recent permit issued for this facility is permit-to-operate number 9421-AA011. This permit-to-operate include all authorizations issued through April 13, 1995, and was issued before January 18, 1997. All facility-specific requirements established in this previous permit are included in the new operating permit as described below.

### **Construction Permits**

No construction permits have been issued for this facility after January 18, 1997 (the effective date of the new divided operating and construction-permitting program).

### **Title-V Operating Permit Application History**

The owner or operator submitted an application on November 19, 1997.

Additional information was received on October 30, 2001.

## **COMPLIANCE HISTORY**

The facility has operated at its current location since 1964. Review of the permit files for this facility, which includes the past inspection reports indicate a facility generally operating in compliance with its operating permit, with the following exception. The Permittee should have applied for a construction permit in 1984 when Source ID 4 was installed.

## FACILITY-SPECIFIC REQUIREMENTS CARRIED FORWARD

State of Alaska regulations in 18 AAC 50.350(d)(1)(D) require that an operating permit include each facility-specific requirement established in a prior permit. The table below lists the permit condition that established a requirement in Operating Permit No. 9421-AA011 and the new condition in Operating Permit No. 164TVP01 that carries the old requirement into the new permit.

**Table B - Comparison of Pre-January 18, 1997 Permit No. 9421-AA011 Conditions to Operating Permit No. 164TVP01 Conditions<sup>7</sup>**

Permit No. 9421-AA011 Condition number	Description of Requirement	Permit No. 164TVP01 Condition Number	How condition was revised
Exhibit A	Source Inventory	Section 3	Source inventory was modified because Source ID 5 has been decommissioned and is no longer at the facility. The Cummins standby generator is insignificant per 18 AAC 50.335(r).
4	Distillate fuel use limit-156,500 gal/month and operational limit-125 hr/month, for Source IDs 1 - 3	none	Condition rescinded because distillate fuel facilities have been removed. Turbines exclusively fire pipeline natural gas.
5 and Exhibit B	Distillate fuel sulfur limit-0.3 wt. %	none	Condition rescinded because distillate fuel facilities have been removed. Turbines exclusively fire pipeline natural gas. The facility's other distillate-fired sources are insignificant.
14 and Exhibit D	Process monitors shall be installed, operated, and maintained	6 - 7	Fuel consumption, operating hours and kilowatt-hours requirements were carried forward.
Exhibit D and E	Diesel sulfur content and gallons of each shipment	none	Requirement rescinded because turbines exclusively fire pipeline natural gas.

<sup>7</sup> This table does not include all standard and general conditions

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## LEGAL AND FACTUAL BASIS FOR THE PERMIT CONDITIONS

**Legal Basis:** The state and federal regulations for each condition are cited in Operating Permit No. 164TVP01.

### Conditions 1 - 2, Fee Requirements

**Applicability:** The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

**Factual Basis:** These standard conditions require the Permittee to pay fees in accordance with the Department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date.

The default assessable emissions are emissions of each air contaminant authorized by the permit (AS 46.14.250(h)(1)(A)). Air contaminant means any regulated air contaminant and any hazardous air contaminant. Therefore, assessable emissions under 18 AAC 50.250(h)(1)(A) means the potential to emit any air contaminant identified in the permit, including those not specifically limited by the permit. For example, hydrogen chloride (HCl) emissions from an incinerator are assessable emissions because they are a hazardous air contaminant, even if there is currently no emission limit on HCl for that class of incinerator.

The conditions also describe how the Permittee may calculate **actual** annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air contaminant. Therefore, fees based on actual emissions must also be paid on any contaminant emitted whether or not the permit contains any limitation of that contaminant.

This standard condition specifies that, unless otherwise approved by the Department, calculations of assessable emission based on actual emissions use the most recent previous calendar year's emissions. Since each current year's assessable emission are based on the previous year, the Department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match. The Permittee will normally pay for actual emissions - just with a one-year time lag.

Projected actual emissions may differ from the previous year's actual emissions if there is a change at the facility, such as changes in equipment or an emission rate from existing equipment.

If the Permittee does not choose to annually calculate assessable emissions, emissions fees will be based on "potential to emit" (PTE).

The PTE set forth in the condition is based on 0.5% by weight sulfur content or fuel gas with a sulfur content of 1 ppm H<sub>2</sub>S by volume. If the actual sulfur content of the fuel is greater than these assumptions, the assessable emissions calculations provided by the Permittee should reflect the actual sulfur content.

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### Condition 3, Visible Emissions Standard

**Applicability:** The visible emission standard applies to operation of all fuel-burning equipment in Alaska. Source ID(s) 1 - 4 are fuel-burning equipment.

**Factual basis:** This condition requires the Permittee to comply with the state visible emission standard applicable to fuel-burning equipment. The Permittee shall not cause or allow the equipment to violate this standard.

This condition has recently been adopted into regulation as a standard condition.

#### **Gas Fired:**

For Source ID(s) 1 – 3, the Permittee shall certify in each facility operating report that the sources burned only gas.

#### **Liquid Fired:**

For Source ID 4, the standby generator, monitoring is waived in accordance with recently issued Department Guidance AWQ 02-014 as long as the unit remains in compliance with its operating hours limit and annually certifies compliance with the opacity standard.

### Condition 4, Particulate Matter (PM) Standard

**Applicability:** The PM standard 18 AAC 50.055(b)(1) applies to operation of all industrial processes or fuel burning equipment in Alaska. Source ID(s) 1 - 4 are fuel-burning equipment. The SIP standard for PM applies to all industrial processes and fuel-burning equipment because it is contained in the federally approved SIP dated October 1983.

**Factual basis:** The condition cites the state particulate-matter emission standard applicable to industrial processes and fuel-burning equipment. The department will use this standard condition in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.

#### **Gas Fired:**

For Source ID(s) 1 – 3, the Permittee shall certify in each facility operating report that the sources burned only gas.

#### **Liquid Fired:**

For Source ID 4, the standby generator, monitoring is waived in accordance with recently issued Department Guidance AWQ 02-014 as long as the unit remains in compliance with its operating hours limit and annually certifies compliance with the particulate matter standard.

### Condition 5, Sulfur Compound Emissions

**Applicability:** The sulfur emission standard applies to operation of all fuel-burning equipment in the State of Alaska. Source ID(s) 1 - 4 are fuel-burning equipment. The SIP standard for sulfur dioxide applies because it is contained in the federally approved SIP dated October 1983. Monitoring of sulfur dioxide emissions is accomplished by analysis of fuel sulfur content.

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**Factual basis:** The condition requires the Permittee to comply with the sulfur emission standard applicable to fuel-burning equipment. The Permittee may not cause or allow their equipment to violate this standard.

Monitoring -

**Diesel Fuel (Fuel Oil):** Fuel Oil sulfur is measured in weight percent sulfur (wt% S). Calculations show that fuel containing no more than 0.5 wt% S will always comply with the emission standard. This is true for all liquid hydrocarbon fuels, even with no excess air. Verification of the ASTM fuel oil grade as No. 1 or No. 2 fuel oil (DF-1 or DF-2) will certify compliance with the standard because these fuel oils always have a fuel sulfur content of no more than 0.5 wt% S. For fuels with a sulfur content higher than 0.75 wt% S, this condition requires the Permittee to use the equations in Section 12 to calculate the exhaust gas SO<sub>2</sub> concentration, showing whether the standard was exceeded. The equations in Section 12 are all based on stoichiometric mass balance.<sup>8</sup>

**Fuel Gas:** Fuel gas sulfur is measured as hydrogen sulfide (H<sub>2</sub>S) concentration in ppm by volume (ppmv). The Permittee shall keep records on file to demonstrate that the pipeline natural gas supplied by ENSTAR meet the specifications of condition 5.2a. The Permittee proposed condition 5.2a to avoid MR&R for sulfur content in gas.

Recordkeeping – The Permittee is required to keep records of fuel sulfur content or the fuel grade of each shipment.

Reporting – The Permittee is required to report emissions in excess of the fuel sulfur limits. The Permittee is required to include fuel grade, sulfur content, and calculated SO<sub>2</sub> emissions with the facility operating report.

## Conditions 6 - 7, Continuous Emission and Process Monitoring Requirements

**Applicability:** These requirements apply because they were established in previous Permit No. 9421-AA011.

**Factual basis:** Conditions 6 and 7 require the Permittee to monitor, record and report fuel consumption, operating hours, and kilowatt-hours of Source ID(s) 1 – 3.

## Condition 8, Limit hours for Source ID 4

**Applicability:** This requirement applies because Chugach Electric Association, Inc. requested a limit for Source ID 4 to avoid PSD review.

**Factual basis:** Source ID 4 was installed in 1984. The Permittee requested an operational limit for this source to assure that the facility is not subject to PSD review. Condition 8 requires the Permittee to monitor, record and report operating hours of Source ID 4.

## Conditions 9 - 12, Insignificant Sources

**Applicability:** These general emission standards apply to all industrial processes fuel-burning equipment, regardless of size.

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<sup>8</sup> <http://www.state.ak.us/dec/dawq/aqm/newpermit.htm>

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**Factual basis:** Conditions 9 through 12 require the Permittee to comply with the general standards for insignificant sources. The Permittee may not cause or allow their equipment to violate these standards. Insignificant sources are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

### **Condition 13, Asbestos NESHAP**

**Applicability:** The asbestos demolition and renovation requirements apply if the Permittee engages in asbestos demolition or renovation.

**Factual Basis:** The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with these federal regulations.

### **Condition 14, Good Air Pollution Control Practice**

**Applicability:** Applies to all sources.

**Factual basis:** This condition has recently been adopted into regulation as a standard condition.

Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate much more quickly, and periodic monitoring that is not continuous would be needed much more frequently to be sure that it is representative. The department will use this standard condition in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.

Records should be kept and available to the department. Records of deferred maintenance can be a reasonable trigger for requesting source testing.

For most existing equipment, the department does not specify that the Permittee must follow manufacturer's recommendations. If the manufacturer's recommendations are not suitable for Alaskan conditions, or don't relate to minimizing emissions, the Permittee can see that they are changed as a condition of purchase for existing equipment.

### **Condition 15, Dilution**

**Applicability:** This state regulation applies to the Permittee because the Permittee is subject to emission standards in 18 AAC 50.

**Factual Basis:** The condition prohibits the Permittee from diluting emissions as a means of compliance with any standard in 18 AAC 50.

### **Condition 16, Reasonable Precautions to Prevent Fugitive Dust**

**Applicability:** Reasonable precautions to prevent fugitive dust requirements apply to the Permittee because the Permittee will engage in bulk material handling, transporting, or

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storing; or will engage in industrial activity at the facility. This condition applies to operating permits for facilities that do not have an approved dust control plan, and contain one of the following sources: coal-fired boilers; coal handling facilities; construction of gravel pads or roads that are part of a permitted facility or other construction that has the potential to generate fugitive dust that reaches ambient air; commercial/industrial/municipal solid waste, air curtain, and medical waste incinerators; sewage sludge incinerators not using wet methods to handle that ash; mines; urea manufacturing; soil remediation units; or dirt roads under the control of the operator with frequent vehicle traffic.

**Factual Basis:** The underlying regulation, 18 AAC 50.045(d), requires the Permittee to take reasonable action to prevent particulate matter (PM) from being emitted into the ambient air.

Not all facilities have the potential to generate fugitive dust during the life of the permit. The Department will determine whether precautions are reasonable based on a variety of factors, including the distance to the facility boundaries, nature and content of the dust, proximity to neighbors, and the nature of the activity. This condition applies to the types of sources or activities that are likely to generate fugitive dust as identified above. It allows the precautions that are identified under the permit to be appropriate and specific to the activities conducted by the Permittee.

If the Department determines that the facility has a minimal potential to generate fugitive dust, no monitoring, recordkeeping or reporting will be required.

### Condition 17, Stack Injection

**Applicability:** Stack injection requirements apply to the facility because the facility contains a stack or source constructed or modified after November 1, 1982.

**Factual Basis:** The condition prohibits the Permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

### Condition 18, Open Burning

**Applicability:** The open burning state regulation in 18 AAC 50.065 applies to the Permittee if the Permittee conducts open burning at the facility.

**Factual Basis:** The condition requires the Permittee to comply with the regulatory requirements when conducting open burning at the facility.

These requirements are necessary to ensure that the State Ambient Air Quality Standards are met to protect public health and to avoid the occurrence of complaints from local residents.

The Department issued an air quality control approval to open burn at the International Station Power Plant. Approval Number: Y012-SC045 expires on September 1, 2006.

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**Condition 19, Air Pollution Prohibited**

**Applicability:** These state regulations apply because the Permittee is subject to the requirements in 18 AAC 50.

**Factual Basis:** The underlying regulations are 18 AAC 50.110 and 18 AAC 50.346. The department will use this standard condition in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.

**Condition 20, Permit Renewal**

**Applicability:** Applies if the Permittee intends to renew the permit.

**Factual Basis:** The Permittee is required to submit a complete application for permit renewal by the specific dates applicable to International Station Power Plant as listed in this condition. International Station Power Plant. Monitoring, recordkeeping, and reporting for this condition consist of the application submittal. No additional requirements are necessary to ensure compliance with this condition.

**Condition 21, Requested Source Tests**

**Applicability:** Applies because this is a standard condition to be included in all permits.

**Factual Basis:** The Permittee is required to conduct source tests as requested by the Department. Monitoring consists of conducting the requested source test, and no recordkeeping or reporting requirements are necessary to ensure compliance with this condition.

**Conditions 22 - 24 Operating Conditions, Reference Test Methods, Excess Air Requirements**

**Applicability:** Applies because the Permittee is required to conduct source tests by this permit.

**Factual Basis:** The Permittee is required to conduct source test as set out in conditions 22- 24. These conditions supplement the specific monitoring requirements stated elsewhere in this permit. The test reports required by condition 28 adequately monitor compliance with conditions 22- 24, therefore no additional MR&R requirements are necessary to ensure compliance with these conditions.

**Conditions 25 - 29, Test Deadline Extension, Plans, Notification, Reports & Exemption**

**Applicability:** Apply when the Permittee is required to conduct a source test.



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**Factual Basis:** The underlying regulations are 18 AAC 50.345(l) – (o). The department will use these standard conditions in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50. Because these standard conditions supplement specific monitoring requirements stated elsewhere in this permit, no monitoring, reporting, or recordkeeping is required. The source test itself is adequate to monitor compliance with this condition.

### Condition 30, Particulate Matter (PM) Calculations

**Applicability:** Applies when the Permittee tests for compliance with the PM standard.

**Factual Basis:** The condition incorporates a regulatory requirement for PM source tests. The Permittee must use the equation given in this condition to calculate the PM emission concentration from the source test results. Because this condition supplements specific monitoring requirements stated elsewhere in this permit, no MR&R is required to ensure compliance with this condition.

### Condition 31, Certification

**Applicability:** This is a standard condition to be included in all permits. Applies because every permit requires the Permittee to submit reports.

**Factual Basis:** This condition requires the Permittee to certify all reports submitted to the Department. To ease the certification burden on the Permittee, the condition allows the excess emission reports to be **certified** with the facility report, even though it must still be **submitted** more frequently than the facility operating report. This condition supplements the reporting requirements of this permit, therefore no additional MR&R is necessary to ensure compliance with this condition.

### Condition 32, Submittals

**Applicability:** Applies because the Permittee is required to send reports to the Department.

**Factual Basis:** This condition requires the Permittee to send submittals to the address specified in this condition. Receipt of the submittal at the correct Department office is sufficient monitoring for this condition. This condition supplements the reporting requirements of this permit, therefore no additional MR&R is necessary to ensure compliance with this condition.

### Condition 33, Information Requests

**Applicability:** Applies to all Permittees, and incorporates a standard condition

**Factual Basis:** This condition incorporates a standard condition in regulation, which requires the Permittee to submit information requested by the Department. Receipt of the requested information is adequate monitoring.

### Condition 34, Recordkeeping Requirements

**Applicability:** Applies because the Permittee is required by the permit to keep records.

**Factual Basis:** The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide adequate evidence of compliance with this requirement, therefore, no additional MR&R is required.

### Condition 35, Excess Emission and Permit Deviation Reports

**Applicability:** Applies when the emissions or operations deviate from the requirements of the permit.

**Factual Basis:** This condition satisfies two State regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The condition does not mandate the use of the Department's reporting form, but it does specify that the information listed on the form must be included in the report.

The reports themselves and the other monitoring records required under this permit provide an adequate monitoring of whether the Permittee has complied with the condition. Therefore, no additional MR&R is necessary to ensure compliance with this condition.

**Table C - List of State Excess Emission Reporting Requirements<sup>9</sup>**

Condition	Description
3.1b	if any fuel is burned other than gas
5.1d(i)	whenever the fuel combusted causes sulfur compound emissions to exceed the standard of condition 5
8.4	if the calculated consecutive twelve-month period in a given month exceeds the limit in condition 8
19.1 & 35.1a(i)	any time emissions present a potential threat to human health or safety
35.1a(ii)	excess emissions that the Permittee believes to be unavoidable
35.1c(i)	report within 30 days of the end of the month in which the emissions or deviation occurs
35.1c(ii)	if a continuous or recurring excess emission is not corrected within 48 hours of discovery, report within 72 hours of discovery

### Condition 36, Operating Reports

**Applicability:** Applies to all permits.

**Factual Basis:** The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit and

<sup>9</sup> This table is for informational purposes. It does not relieve the Permittee of any requirements stated in Operating Permit 164TVP01.

does not need any MR&R. The reports themselves are adequate monitoring for compliance with this condition.

**Table D - List of Documents to be Attached to the Facility Operating Report<sup>10</sup>**

Condition	Parameter	Description
3.1a	Fuel gas	certification that the sources burned only gas
5.1d(ii)	Fuel oil sulfur content	the fuel sulfur content records or the fuel grade of each shipment all material balance calculations
6.2	Fuel Consumption	quantity of fuel gas burned in million cubic feet per month for each source
7.2	Operating Hours & Kilowatt-hours	number of hours per each month for each source, maximum one hour production per month for each source, total power generated (kilowatt/hour) per month, and year-to-date total for each source.
8.3	Hour of operation	the rolling 12-month total of hours operated for each month
19.5	complaints	summary of complaints received
36.2	excess emissions or permit deviations	summary of excess emissions or permit deviations during the reporting period that are not reported under condition 36.1

### **Condition 37, Annual Compliance Certification**

**Applicability:** Applies to all Permittees.

**Factual Basis:** This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. Because this requirement is a report, no MR&R is needed.

### **Conditions 38 - 44, Standard Conditions**

**Applicability:** Applies because these are standard conditions to be included in all permits.

**Factual Basis:** These are standard conditions required for all operating permits.

### **Section 11, Permit Shield**

**Applicability:** Applies because the Permittee has requested a shield for the applicable requirements listed under this condition.

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<sup>10</sup> See footnote 9.

**Factual Basis:** Section 11 sets forth the requirements that the Department determined were not applicable to the facility, based on the permit application, past operating permit, construction permits and inspection reports.

The table below identifies application shield requests that were denied, and the reason they were denied.

**Table E - Permit Shields Denied**

<b>Applicable Requirements</b>	<b>Reason for Denial</b>
AQC Permit 9421-AA011, conditions 1 - 21	Each facility-specific requirement established in a permit issued before Jan 17, 1997 must be included [18 AAC 50.350(d)(1)(D)].
AQC Permit 9421-AA011, Exhibits A, B, C, D, E, and F	Each facility-specific requirement established in a permit issued before Jan 17, 1997 must be included [18 AAC 50.350(d)(1)(D)].
18 AAC 50.045(d)	This requirement applies to all facilities in the State of Alaska.

### **Removal of Credible Evidence condition from Draft Operating 164TVP01**

#### **18 AAC 50.345 – Credible Evidence – Proposed Subsection (p)**

The comments were received during the three public comment periods on proposed standard conditions for Title V operating permits.

#### Comment

Commenters stated that the proposal goes beyond the Clean Air Act because EPA limited their credible evidence provisions so that they do not apply generally through Title V.

Comments say that other states do not use credible evidence statements in their permits to support their monitoring conditions. Oregon DEQ is given as an example.

#### Response

The department has not adopted the proposed subsection because we have determined that it is not necessary, as described below.

The department does not need this statement regarding compliance certifications. Compliance certifications must already be certified with a notarized signature as true, accurate, and complete based on reasonable inquiry.

The department also does not need to adopt the statement that nothing in a permit precludes the use of any credible evidence for establishing whether or not the Permittee has violated or is in violation of any standard. This is already true under the Alaska's rules of evidence, and nothing in this permit program changes that fact. It is with this understanding that the department has decided not to adopt the proposed subsection (p).

To comply with regulations under the Clean Air Act, Alaska's program must not preclude the use of any credible evidence for determining compliance with any requirements of 40 C.F.R. 60

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or 61, or the State Implementation Plan. The department has specifically incorporated this concept in its adoption by reference of the Subparts A of 40 C.F.R. 60 and 61. This requirement as it appears in 40 C.F.R. 51 (governing state implementation plans) is satisfied because the use of any credible evidence is not precluded by Alaska's rules of evidence or this permit program.